Negative growth: the future of obesity in Australia

Research highlights

The nature and impact of Australia's obesity problem

Introduction

Obesity is a global phenomenon in developed nations and is associated with a number of long-term health issues including diabetes, cardiovascular disease, some cancers, musculoskeletal disease, and disability (Peeters & Backholer 2012).

In Victoria, one in four adults is now obese (Department of Health 2012) and, along with tobacco smoking, obesity contributes the greatest burden of disease (Department of Human Services 2005), costing Victorians between $485 million and $800 million annually in excess healthcare costs (Access Economics 2008; CEIPS 2013; Colaguiri et al. 2010). Not only is the weight of the population increasing, the statistics are increasingly skewed towards more severe levels of obesity: between 1980 and 2000, the prevalence of class I (least severe) obesity among urban Australian adults increased by about 60%, while the prevalence of class III (most severe) obesity increased more than four-fold (Walls et al. 2010).

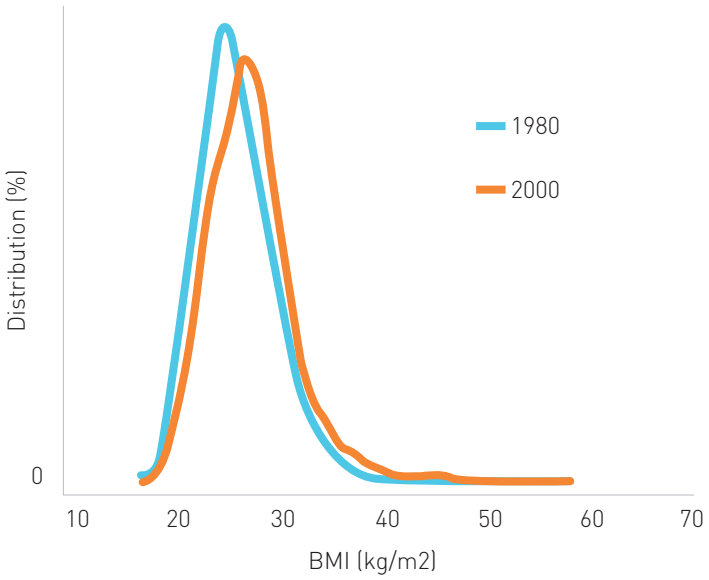
Tackling the urgent, complex and worsening problem of obesity in Australia will require long-term commitment, cooperation and innovation within all levels and sectors of the community.

Weighing in: Australia in 2025

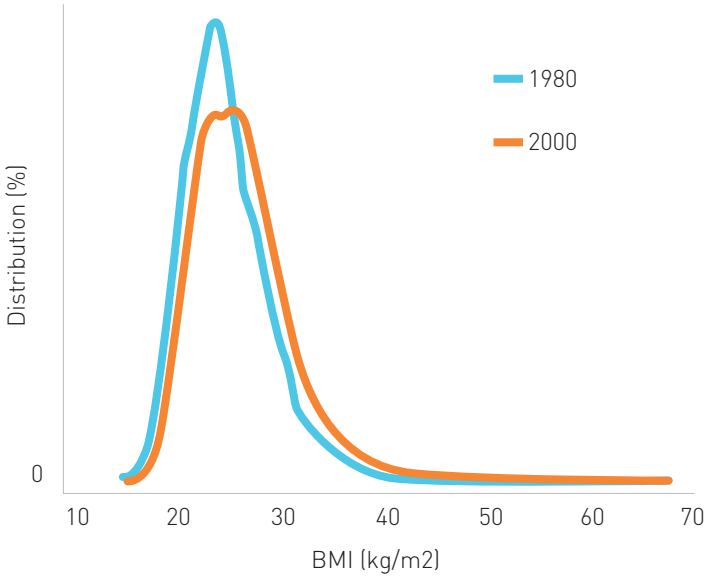
It is projected that by 2025 around 83% of Australian men and 75% of women aged 20 years and over will be overweight or obese, as well as one-third of 5-19 year olds. When combined with population growth projections, this equates to 16.9 million Australians being overweight or obese in 2025 (Haby et al. 2012; Walls et al. 2011). In addition, Australians are living longer with obesity, with overweight more frequently beginning in childhood or early adulthood. Those who have been obese for 15-24 years have more than twice the risk of diabetes compared with those who have been obese for less than five years, and death from all causes also increases with every additional year lived with obesity (Abdullah et al. 2012).

> By 2025, more than three-quarters of Australian adults will be overweight or obese.

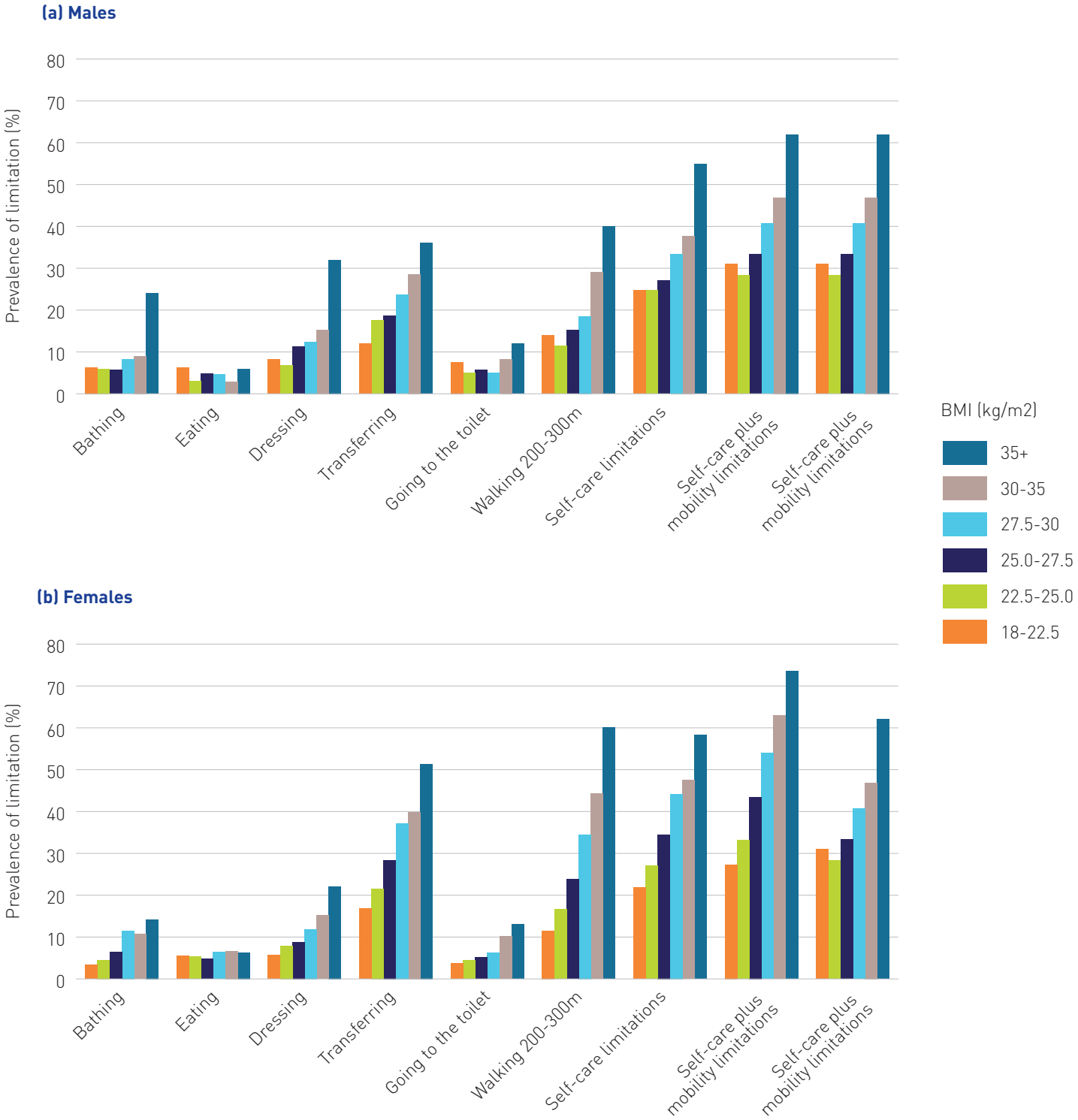
Distribution of BMI among males



Distribution of BMI among females



A skewed increase: Distribution of BMI among urban Australian males and females aged 25–64 years in 1980 and 2000.



Increasing prevalence of disability in old age according to middle-age BMI categories for (a) males and (b) females

Although improved management of diabetes and cardiovascular disease may mean that obesity-related mortality is declining, the future burden of associated chronic illness and disability is likely to increase (Peeters & Backholer 2012). The higher an individual's Body Mass Index (BMI) level in middle age, the more likely he or she is to experience difficulties with self care and mobility in old age. For those in the upper overweight category (BMI between 27.5 and 30), this means a 50% and 250% increase in the odds of disability for males and females, respectively. For those in the upper obese category (BMI ≥ 35), this may surge to an up to six-fold increase in disability risk (Backholer et al. 2012a). The obesity-related burden of disease and healthcare costs are likely to increase over time, highlighting an urgent need for effective prevention and treatment strategies.

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New paradigms in obesity-related research

The evolving weight profile of the Australian population and the increasing skewing of the population curve towards severe obesity is challenging established associations and assumptions in research.

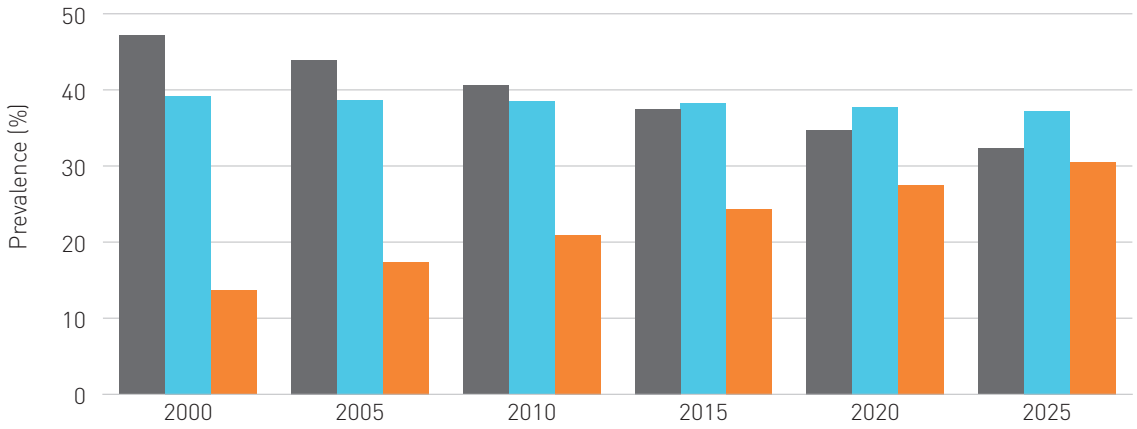
One key factor is the duration of obesity, recently shown to predict risk for type 2 diabetes and mortality independent of BMI. The concept of 'obese-years', incorporating both degree and duration of obesity, has been shown to be a strong predictor of diabetes risk, and may be better indicator for the health risks associated with obesity than either element alone (Abdullah et al. 2012).

A further issue in this area of research, particularly in the translation of evidence into policy and planning for prevention and intervention, is a lack of data. Although there are several sources of good cross-sectional data, there are limited comparable Australian longitudinal data available, and better data linkage is needed to optimise the potential of this area of research.

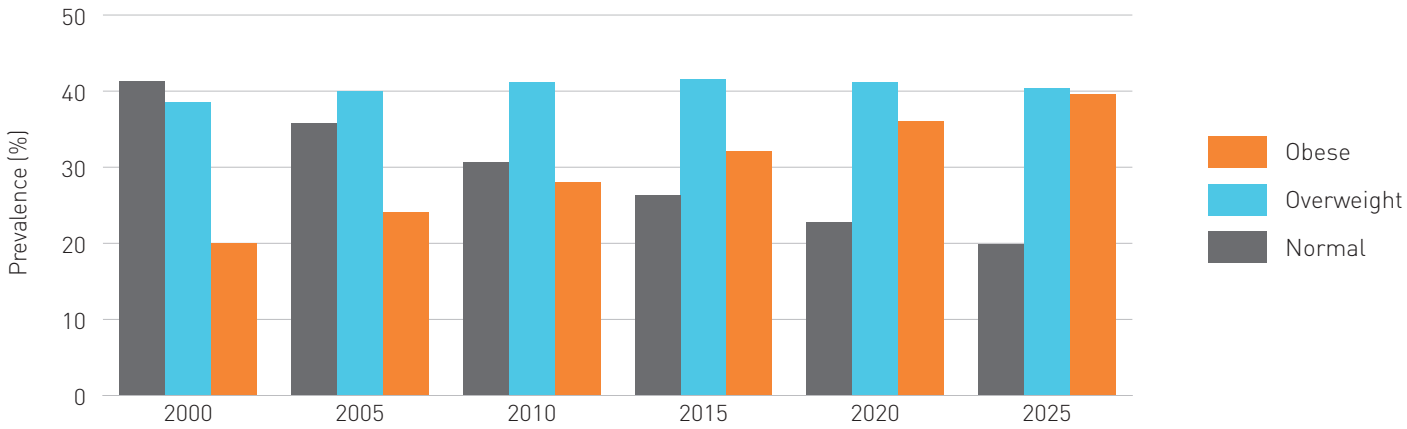
Low socioeconomic populations: an important target

Recent research and modelling has found that obesity represents a newfound threat to health equality in Australia. Inequalities in the burden of obesity exist along socioeconomic gradients, and are likely to worsen over time. Modelling suggests that while in 2000 the prevalence of obesity weight was 7% lower among those educated to degree level compared to those with secondary school qualifications only, this gap will increase to 14% by 2025 (Backholer et al. 2012b). In these studies, educational attainment was used as an indication of socioeconomic status.

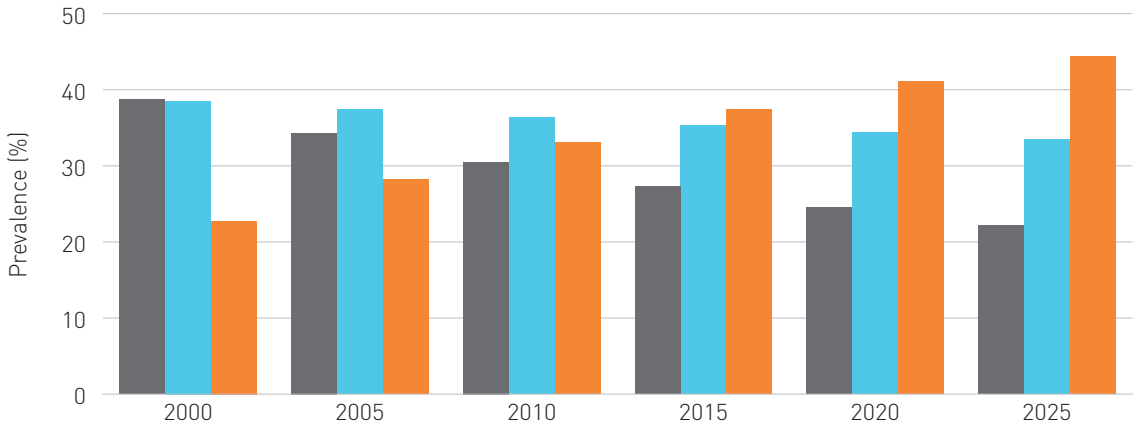
Degree educated



Diploma educated



Secondary educated



Projected prevalence to 2025 of normal weight, overweight and obesity in Australia according to educational attainment

These projections represent a combination of current inequalities in the burden of obesity as well as ongoing disparities in the rate of weight gain between Australian populations grouped by educational status. These disparities are likely to lead to increases in socioeconomic inequities in health outcomes including diabetes and heart disease. As the researchers concluded, "current obesity trends and their management have the potential to drive increased social inequalities in health" (Backholer et al. 2012b).

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Workplace contributions to ill health

Although data is limited, there is some evidence that factors such as working overtime, shift work and job stress may increase the risk of type 2 diabetes within a workforce (Freak-Poli & Peeters 2012).

However, there are a number of ways in which a workplace may be able to target or decrease the effects of key determinants of obesity-related ill-health and support workers in understanding and managing key health risks.

When it comes to occupational health and safety practice, workplace 'safety' in terms of accidents and acute injuries has been well targeted in recent times, but a shift to improving the long-term health outcomes for employees is warranted for the 21st century. This could encompass:

- nutrition guidelines for the food supply within the workplace, e.g. selection of vending machine products and catering guidelines
- facilitating physical activity and reducing sedentary behaviour in the work environment, e.g. allowing time for exercise and provision of standing desks
- screening, e.g. for diabetes and cardiovascular risk factors
- educational initiatives.

Prevention and management

Given the current levels of obesity in Australia, the projected prevalence in the next decade or so, and the associated health burden, continuing to develop and implement better approaches to address obesity is clearly of vital importance. In particular, interventions are required to narrow the differences in obesity prevalence between socioeconomic groups.

While there is evidence that significant weight loss (through gastric band surgery) is effective in reducing mortality risk (Peeters et al. 2007), modelling has shown this will not be an effective strategy for lowering obesity-related mortality at the population level (Walls et al. 2009). Regardless, optimal management of those who are already obese is important: appropriate resources should be allocated and infrastructure developed to support its management.

In the longer term, primary prevention through a reduction in the incidence of obesity is a key component of any solution. Interventions could potentially target the whole population, those already overweight and/or particular population groups such as children and those from socioeconomically-disadvantaged groups.

While there is currently limited evidence for the effectiveness of community-based and social marketing interventions, it is important that they are evaluated for their impacts on socioeconomic inequity in health as well as their overall effectiveness. Strategies that focus on information provision alone or aim to motivate individuals to change their behaviour, for example to eat differently to others in their social groups or consume a diet that is not easily accessed in their communities, need to be part of a more coordinated, broader program of activity or they may contribute to the socioeconomic gap in health outcomes (Walls et al. 2011). While the reasons for these disparities are not well understood, maintaining a focus on equity within knowledge, attitude and behaviour change strategies is likely to be most effective and sustainable when complemented and reinforced by changes to the socioeconomic, political and cultural context.

Addressing the obesity problem in Australia "requires much greater change than has been attempted or achieved to date, and at multiple levels" (Australian Government Preventative Health Taskforce 2009). The interventions likely to be the most effective are those that increase the economic incentive for healthy choices and/or alter physical, cultural and consumer environments to facilitate a healthier lifestyle: making the healthy choice the easy choice, and decreasing the accessibility, availability and affordability of unhealthy options. However, significant barriers remain in achieving high-level regulatory change, including conflicting agendas among stakeholders, competing priorities within governments, a lack of evidence of effectiveness and the complexity, cost and long-term commitment required to implement such initiatives and achieve significant change (Allender et al. 2011; Shill et al. 2012).

To be successful, interventions should be innovative and involve long-term commitment from the full range of stakeholders including all levels of government, health care and research industries, private organisations and communities.

Conclusions

Much progress has been made by all levels of government in Australia in acknowledging the obesity epidemic and committing to action. However, to maintain a healthy weight, Australians are fighting against a tide of environmental factors that are driving the population towards ever-increasing obesity and the associated health risks. The drivers of obesity and barriers to successful interventions are numerous and complex, and innovative strategies are needed to address them.

A collaborative, coordinated and multi-level approach involving multiple sectors, levels of government, industry, the community and individuals is required to affect a long-term and multigenerational cultural shift. The recommendations of the Preventative Health Taskforce (Australian Government Preventative Health Taskforce 2009) and the Healthy Together Victoria initiative (www.healthytogether.vic.gov.au) provide excellent examples of such a multifaceted approach.

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Recommendations

Based on these research findings and in conjunction with A/Professor Peeters, VicHealth makes the following recommendations:

Federal government

- Display strong leadership and facilitate discussions around taxation and/or subsidy initiatives and advertising restrictions to facilitate healthy eating choices, e.g. restrictions on advertising unhealthy foods to children.
- Set a positive example through food procurement and catering policies for hospitals and other public institutions.
- Promote, facilitate and evaluate the universal implementation of the Healthy Star Rating labelling scheme on processed foods, as well as exploring other potential measures (e.g. traffic light labelling) that better enable people to identify healthier food choices.

State governments

- Provide strong leadership and facilitate relevant partnerships to ensure local environments promote physical activity and healthy eating choices, e.g. Victoria's establishment of *Healthy Together Victoria*.
- Set a positive example through food procurement and catering policies for hospitals and other public institutions, e.g. mandating *Healthy Choices* in Victoria.
- Mandate and provide practical advice to local governments, e.g. through *Municipal public health and wellbeing plans* in Victoria.

Local governments

- Develop partnerships and implement initiatives that facilitate physical activity and healthy eating choices in the local environment. Examples include facilitating access to healthy food choices through catering guidelines and food procurement policies, incorporating food-related objectives and strategies into urban planning, particularly in growth areas, and supporting options for active travel.

Workplaces

- Support employees in understanding and managing lifestyle risks in the workplace. This could be achieved through screening programs, employing an occupational health nurse, ensuring access to healthy food choices, as well as opportunities for increasing physical activity and reducing prolonged sitting.
- Update OH&S policies and procedures to address obesity-related health risks in the workplace, e.g. adoption of healthy eating and physical activity benchmarks for workplaces as set out in Victoria's *Healthy Together Victoria Achievement Program*.
- Develop food procurement guidelines to support healthy eating behaviour and workplace culture. This could include guidelines for workplace catering, staff meetings and celebrations, access to healthy choices in vending machines and discouraging the use of unhealthy foods for fundraising. For an example, see *Healthy choices: healthy eating policy and catering guide for workplaces*.
- Implement changes to workplace practices and environments to increase physical activity and reduce prolonged sitting and sedentary behaviours, such as implementing policies that encourage incorporating activity into work practices, e.g. standing or walking meetings.
- Provide facilities that support physical activity before, during and after work, such as the provision of bike racks and showers, or locating printers and waste bins away from desks.

Research sector

- Add to the evidence base to inform better practice:
  - prioritise action-oriented obesity prevention research in real-world settings
  - build the evidence for regulatory reform addressing obesity and the reduction in associated socioeconomic disparities
  - explore how to improve management options for those already obese who are unlikely to benefit from population-wide approaches.
- Advocate for relevant, regular and ongoing cross sectional Australian data collection.

Individuals

- Get involved and be a champion for change in your own home, family, kindergarten, school and workplace.
- Join the Parents' Jury (www.parentsjury.org.au) which advocates for healthier options and less marketing of junk foods to children.
- Use available tools and technologies to make better food choices and increase physical activity levels, e.g. the George Institute's Food Switch app (www.georgeinstitute.org/projects/foodswitch), VicHealth's TeamUp app (http://teamup.com.au).

Associate Professor Anna Peeters, VicHealth Research Fellow 2008–13

This summary is based largely on the work of Associate Professor Anna Peeters, whose research focuses on chronic disease modeling with supporting work on population distribution and trends in body weight, the health risks associated with obesity, population health implications and health benefits associated with interventions. As a whole, her work provides insights into what is happening to the weight of our population, what it means for our community, and how to improve the health of our population.

A/Professor Peeters' research was funded through a VicHealth Public Health Fellowship from 2008 to 2013. Her research attracted additional funding through the NHMRC and the Australian Research Council, and an Australian National Preventative Health grant to broaden the scope of her work, with an emphasis on the socioeconomic disparities and the implementation of policy interventions to improve population health.

Throughout her Fellowship A/Professor Peeters regularly participated on advisory panels and was involved in discussions with federal and state government and non-government representatives to discuss her research findings and provide expert advice. This enabled uptake of the findings by a range of community organisations and their incorporation into current government policy and planning.

Since June 2011, she has been the President of the Australian and New Zealand Obesity Society.

VicHealth

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